

Abstract of the Disclosure

[0031] An Asynchronous Transfer Mode (ATM) signal is phase modulated based on an Internet Protocol (IP) signal to form a combined ATM/IP signal. The ATM signal is phase modulated without exceeding a specified tolerance of symbol period of the ATM signal. The combined ATM/IP signal is communicated on a passive optical network to multiple receiving locations. An ATM stream specific to a receiving location can be extracted from the combined ATM/IP signal by an existing ATM-based optical network termination (ONT). An IP stream can be extracted at a receiving location by phase demodulating the combined ATM/IP signal.